



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,701	02/03/2006	Xiaobao Chen	DYC-00700	3794
28960	7590	03/31/2009	EXAMINER	
HAVERSTOCK & OWENS LLP 162 N WOLFE ROAD SUNNYVALE, CA 94086			LEE, JAE YOUNG	
ART UNIT	PAPER NUMBER			
		2419		
MAIL DATE	DELIVERY MODE			
03/31/2009	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,701	Applicant(s) CHEN ET AL.
	Examiner JAE Y. LEE	Art Unit 2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 January 2009.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 11-19, 24 and 26-28 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 11-19, 24, and 26-28 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 23 January 2009 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Response to Amendment

1. Claims 1-10, 20-23, 25, and 29 have been canceled.

Response to Arguments

2. Applicant's arguments filed on 23 January 2009 have been fully considered but they are not persuasive.
3. On page 12 of the Applicant's Response, applicant argues that Lee does not teach or suggest "packet radio network"
4. The Examiner respectfully disagrees with Applicant's arguments, because Lee discloses "packet radio network (Fig. 3), mobile nodes (col 1 lines 7), and tunnels (col lines 55-57)."
5. Applicants also argue on page 13, Lee also fails to teach or suggest "*controlling the egress or ingress of internet packets to the packet radio network in accordance with the information contained in the hop-by-hop extension header field which is inspected by the gateway support node ... detecting in the hop-by-hop extension header a source address of the mobile correspondent node.*"
6. The Examiner disagrees with the Applicant's because Lee discloses "correspondent agent (Fig. 3 60), Router Alert alerting programmed routers to review (col 3 lines 62-66; the hop-by-hop extension implicitly exists since portion of the Binding Update includes Router Alert option), message traveling through the tunnel (col 4 lines 17), IP source/destination address in header (col 7 lines 3-5), restoring the IP

destination address to the mobile node's home address (Fig. 3; col 7 lines 2-12), and mobile node's home address in a packet (col 7 lines 7-11)." Rinne discloses "GGSN (Fig. 3), IPv6 packet's hop-by-hop option field (col 15 lines 5-14), and type value, a value field's length (Fig. 11, col 15 lines 14-17)." It is obvious that destination address for packets sent to the mobile node would be its home address and the source address of packets sent from the mobile node would be its home address. Therefore, Lee in view of Rinne teach controlling IP packets to the packet radio network according to hop-by-hop extension including router alert option within Binding Update by the GGSN.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 11-19, 24, 26-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 6,915,325) in view of Rinne et al. (US 6,845,100).

For claims 11, 18, Lee discloses a system and a method comprising:

- a gateway support node (Fig. 3 60: correspondent agent) operable to provide an interface between an external packet data communications network and a packet radio network (Fig. 3), the packet radio network providing a plurality of packet data bearers for communicating the internet packets with nodes attached to the packet radio network (Fig. 3; col 1 lines 7: mobile nodes; col 3 lines 55-57: tunnels), each of the packet data bearers being defined with respect to a source home address of nodes communicating the internet packets (col 3 lines 55-57: tunnels; col 7 lines 7-11: mobile node's home address in a packet), the gateway support node (Fig. 3 60: correspondent agent) being arranged to receive an internet packet comprising a header field, the header field including a field identifying a source address of the internet packet, a field identifying the destination address of the internet packet (col 7 lines 3-5: IP source/destination address in header) and a next header field identifying whether an extension header follows the header, the header field identifying that the extension header includes a hop-by-hop extension header, the hop-by-hop extension header including a router alert option header indicating that the hop-by-hop extension header is optional for a router to read (col 3 lines 62-66: Router Alert alerting programmed routers to review; The hop-by-hop extension implicitly exists since portion of the Binding Update includes Router Alert option), the remainder of the hop-by-hop extension header including a field providing a home address of a

mobile node (col 7 lines 7-11: mobile node's home address in a packet), the gateway support node being operable upon receipt of the internet packet (Fig. 3 60: correspondent agent)

- to detect that the next header field of the internet packet includes a hop-by-hop extension header (col 4 lines 4-8: recognizing a Binding Update including a Router Alert), and
- to detect the router alert option header in the hop-by-hop extension header (col 4 lines 4-8: recognizing a Binding Update including a Router Alert), to recover information from a field provided in the remainder of the hop-by-hop extension header for use in controlling egress and/or ingress of internet packets to the packet radio network in accordance with the information (Fig. 3; col 7 lines 2-12: restoring the IP destination address to the mobile node's home address. It is implicitly accomplished by using either encapsulation method or not; col 4 lines 17: message traveling through the tunnel) , wherein
 - the gateway support node (Fig. 3 60: correspondent agent)
 - controls ingress of internet packets from the external communications network to the packet data bearers of the packet radio network (Fig. 3; col 4 lines 4-8: correspondent agent recognizing a Binding Update including a Router Alert), by
 - detecting from the information field provided in the remainder of the hop-by-hop extension header a source home address of a mobile correspondent node communicating the internet packets (Fig. 3; col 4 lines 4-8: correspondent agent

recognizing a Binding Update including a Router Alert; col 7 lines 7-11: mobile node's home address in a packet),

- using the home address to identify the packet data bearer for communicating the internet packets to a correspondent node attached to the packet radio network (col 4 lines 11-18: after forming tunnel by binding mobile node address with the care of address, the message travels through the tunnel; col 7 lines 2-12: changing the IP destination address from the mobile node's home address to the care-of address. It is implicitly accomplished by using either encapsulation method or not), and
- allowing ingress of the internet packets to the identified packet data bearer (col 4 lines 11-18: the message travels through the tunnel).

Lee discloses all the subject matter of the claimed invention with the exception for a type of the extension header and detecting the value field indicating that the remainder of the hop-by-hop extension header field is for the gateway support node. Rinne discloses a type of the extension header and detecting the value field indicating that the remainder of the hop-by-hop extension header field is for the gateway support node (Fig. 3: GGSN; Fig. 11, col 15 lines 14-17: type value, a value field's length). Therefore, it would have been obvious to the person of ordinary skill in the art at the time of invention was made to incorporate a type of the extension header and detecting the value field indicating that the remainder of the hop-by-hop extension header field is for the gateway support node of Rinne to the system and the method of Lee. The motivation would have been to provide RNC reporting a difference between the

requested maximum allowed latency and the realized latency time to enable fast transport format set reconfiguration in case of problems by using latency counter defined in hop-by-hop option field (Rinne col 14 lines 64-67; col 15 lines 12-19).

For claim 16 referenced by claim 11, Lee discloses a packet radio network operable to communicate internet packets between an external packet data network and nodes associated with the packet radio network (Fig. 3), the packet radio network providing a plurality of packet data bearers for communicating the internet packets to and/or from the nodes attached to the packet radio network, the packet radio network including a gateway support node (Fig. 3 60: correspondent agent; col 1 lines 7: mobile nodes; col 3 lines 55-57: tunnels).

For claims 24, 28 referenced by claim 18, Lee discloses computer readable memory device comprising computer executable instructions forming a computer program to be executed by a data processor (col 9 lines 9-43).

For claim 12, Lee discloses

- the gateway support node (Fig. 3 60: correspondent agent) allowing ingress of the internet packets (col 4 lines 11-18: the message travels through the tunnel) if either the address in the source address field of the internet packet or the address provided in the field in hop-by-hop extension header for the gateway support node corresponds to a packet data bearer (col 4 lines 11-18: after forming tunnel by binding mobile node address with the care of address, the message travels through the tunnel; col 7 lines 2-12: IP destination address as

care-of address in header, changing the IP destination address from the mobile node's home address to the care-of address. It can be accomplished by using either encapsulation method or not)

For claims 13, 19, 26, Lee discloses

- the gateway support node (Fig. 3 60: correspondent agent) performing egress packet filtering in accordance with a destination address of the internet packets received from the plurality of packet data bearers, egress of the internet packets being allowed for internet packets having a legitimate destination address, and upon receipt of the internet packet (col 7 lines 22-25: filtering to match the mobile node home address and translating the IP destination address to the care-of address, 25-28: correspondent agent receiving data addressed to the mobile, existing firewall functions will match and translate the data according to the filter)
- detecting from the information data provided in the hop-by-hop extension header field for the gateway support node a destination home address of a mobile correspondent node which is to be the destination of the internet packets (col 4 lines 4-8: recognizing a Binding Update including a Router Alert; col 7 lines 2-12: restoring the IP destination address to the mobile node's home address. It can be accomplished by using either encapsulation method or not), and
- allowing egress of the internet packets if the gateway support node recognizes the destination home address as a legitimate home address (col 7 lines 22-25: filtering to match the mobile node home address and translating the IP

destination address to the care-of address, 25-28: correspondent agent receiving data addressed to the mobile, existing firewall functions will match and translate the data according to the filter; col 4 lines 17: message traveling through the tunnel; it is obvious that the message travels through the tunnel only if matching the criteria of firewall)

For claims 14, 27, Lee discloses

- the gateway support node allowing egress of the internet packets if either the address in the destination address field of the packet or the address provided in the hop-by-hop extension header for the gateway support node is a legitimate destination address (col 3 lines 62-66: Router Alert alerting programmed routers to review; The hop-by-hop extension implicitly exists since portion of the Binding Update includes Router Alert option; col 7 lines lines 2-12: IP destination address as care-of address in header, changing the IP destination address from the mobile node's home address to the care-of address. It can be accomplished by using either encapsulation method or not, 22-25: filtering to match the mobile node home address and translating the IP destination address to the care-of address, 25-28: correspondent agent receiving data addressed to the mobile, existing firewall functions will match and translate the data according to the filter; col 4 lines 17: message traveling through the tunnel; it is obvious that the message travels through the tunnel only if matching the criteria of firewall)

For claim 15, Lee discloses

- the gateway support node (Fig. 3 60: correspondent agent).

Lee discloses all the subject matter of the claimed invention with the exception for a Gateway GPRS Support Node (GGSN), according to the General Packet Radio System standard. Rinne discloses a Gateway GPRS Support Node (GGSN), according to the General Packet Radio System standard (Fig. 3: GGSN; col 6 lines 16-18: GPRS). Therefore, it would have been obvious to the person of ordinary skill in the art at the time of invention was made to incorporate a Gateway GPRS Support Node (GGSN), according to the General Packet Radio System standard of Rinne to the system and the method of Lee. The motivation would have been to take place QoS classification in the 3G GGSN to better optimize the air interface and to solve the arising congestion problems in the best possible way (Rinne col 5 lines 19-22; col 8 lines 25-26).

For claim 17, Lee discloses

- the packet radio network and the gateway support node (Fig. 3)

Lee discloses all the subject matter of the claimed invention with the exception for General Packet Radio System (GPRS) standard and Gateway GPRS Support Node (GGSN). Rinne discloses General Packet Radio System (GPRS) standard and Gateway GPRS Support Node (GGSN) (Fig. 3: GGSN; col 6 lines 16-18: GPRS). Therefore, it would have been obvious to the person of ordinary skill in the art at the time of invention was made to incorporate General Packet Radio System (GPRS) standard and Gateway

GPRS Support Node (GGSN) of Rinne to the system and the method of Lee. The motivation would have been to take place QoS classification in the 3G GGSN to better optimize the air interface and to solve the arising congestion problems in the best possible way (Rinne col 5 lines 19-22; col 8 lines 25-26).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jae Y. Lee whose telephone number is (571) 270-3936. The examiner can normally be reached on Monday through Friday from 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Ryman can be reached on (571) 272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jae Y Lee/
Examiner, Art Unit 2419

/Daniel J. Ryman/
Supervisory Patent Examiner, Art
Unit 2419